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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/049,308

02/12/2002

Muradin Abubekirovich Kumakhov

KUMAKHOV-00273

3739

7590

05/18/2004

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EXAMINER

CHURCH, CRAIG E

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 10/049,308	Applicant(s) KUMAKHOV, MURADIN ABUBEKIROVICH	
	Examiner Craig E. Church	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**The following is a quotation of the first paragraph of 35 U.S.C. 112:**

**The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.**

**The specification is objected to under 35 U.S.C. 112 first paragraph as failing to provide an enabling disclosure. There is no teaching of x-ray optics capable of collecting x rays over a region of 4 pi steradians and guiding it to detection apparatus.**

**Claims 28-54 are rejected under 35 U.S.C. 112 first paragraph for the reasons set forth in the objection to the specification.**

**The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:**

**A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.**

**Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.**

**Claims 35-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komardin (6175117). Komardin teaches apparatus and methods employing scattered x rays to locate and image malignant tissues comprising x-ray source 20 (or multiple sources), collimator 22, patient support 68, 2 dimensional scatter**

detector 28, means 70 for moving optics housing 14 and computer and display means. Tissue composition and density may be determined. Komardin does not teach that collection of scattered x rays occurs over 4 pi steradians, but his detector is two dimensional, and It would have been obvious to one of ordinary skill in the art at the time the invention was made to collect data over as large a volume as necessary to obtain desired resolution.

Claims 28-34 are rejected under 35 U.S.C. § 103 as being unpatentable over Adler (5207223) cited by applicant in view of Komardin. As described in applicant's specification Adler teaches radiation therapy in which transmission x-ray images are employed to identify and locate malignant tissues in preparation for x-ray treatment thereof but fails to teach acquiring images via x-ray scatter. Komardin teaches apparatus and methods employing scattered x rays to locate and image malignant tissues comprising x-ray source 20 (or multiple sources), collimator 22, patient support 68, 2 dimensional scatter detector 28, means 70 for moving optics housing 14 and computer and display means. Tissue composition and density may be determined. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace Adler's transmission images with the scatter images taught by Komardin in order to reduce harmful patient dosage.

Applicant's amendment filed December 29, 2003 does not traverse the previous rejections under 35 USC 103.

Any inquiry concerning this communication should be directed to Examiner Church at telephone number (571) 272-2488.

*Craig E Church*

**Craig E. Church**  
**Senior Examiner**  
**Art Unit 2882**